

## I CLAIM

1. A method for reducing iDCT execution time, said method comprising the steps of:

- 5           a)     examining the coefficients of a DCT block to determine the position of the EOB coefficient;
- b)     selecting an iDCT algorithm from the set consisting of: iDCT Normal, iDCT\_high, iDCT\_low, iDCT\_AC and iDCT\_DC; said algorithm determined by said EOB coefficient; and
- 10           c)     executing said iDCT algorithm.

2. The method of claim 1, wherein said iDCT\_high algorithm available to said method is determined by creating an EOB histogram of the first B-frame of a shot.

15           3. The method of claim 1, wherein said iDCT\_low algorithm available to said method is determined by creating an EOB histogram of the first B-frame of a shot.

20           4. A system for reducing iDCT execution time, said system comprising:

              a)     determination means for determining the position of an EOB coefficient in a DCT block;

              b)     selection means for selecting an iDCT algorithm based upon the position of said EOB; and

25           c)     execution means for executing said iDCT algorithm.

5. The system of claim 4, wherein said iDCT algorithm is determined by creating an EOB histogram of the first B-frame of a shot.

6. A computer readable medium containing instructions for reducing iDCT execution time, said instructions performing the steps of:

a) examining the coefficients of a DCT block to determine the position of the EOB coefficient;

5                   b) selecting an iDCT algorithm from the set consisting of: iDCT Normal, iDCT\_high, iDCT\_low, iDCT\_AC and iDCT\_DC; said algorithm determined by said EOB coefficient; and

c) executing said iDCT algorithm.

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upon an EOB coefficient of 39 or 40.

8. The method of claim 3 wherein said iDCT\_low algorithm is based upon an EOB coefficient of 14 or 25.

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9. The medium of claim 6 wherein said iDCT\_high algorithm is based upon an EOB coefficient of 39 or 40.

10. The medium of claim 6 wherein said iDCT\_low algorithm is based  
20 upon an EOB coefficient of 14 or 25.

11. A system for reducing iDCT execution time, said system comprising:

a) a plurality of iDCT algorithms;

b) a switch for selecting a selected algorithm from said plurality of  
25 algorithms; and

c) a computer processor for executing said selected algorithm.

12. The system of claim 11 wherein said switch accepts as input:

a) a block of DCT coefficients;

- b) an EOB address; and
- c) a picture type rate.

13. The system of claim 11 wherein said plurality of iDCT algorithms  
5 comprises:

iDCT\_Normal, iDCT\_high, iDCT\_low, iDCT\_AC and iDCT\_DC

14. The system of claim 13 wherein said iDCT\_high algorithm is selected  
based on an EOB value of 39 or 50.

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15. The system of claim 13, wherein said iDCT\_low algorithm is selected  
based upon an EOB value of 14 or 25.

16. The system of claim 13 wherein said iDCT\_low and iDCT\_high  
15 algorithms are determined based upon an EOB histogram of the first B-Frame of a  
shot.